REMARKS/ARGUMENTS

Claims 1-7 are pending. Claims 1 and 3-7 are currently amended to improve readability and to place the application in better format for examination. No new matter has been entered.

Applicants respectfully request that Examiner Yang consider and initial reference AW listed on Form PTO 1449 submitted June 5, 2006.

Concerning the 35 U.S.C. §103(a) rejections based on *Kuroda*, Applicants respectfully submit that *Kuroda* does not render obvious any of the currently pending claims. *Kuroda* teaches a Si content of 0.25-2.10% while Applicants claim 0.1-1.5% (*Kuroda* col. 4, line 60, and Applicants' claim 1). These ranges overlap and therefore establish, with regard to this claim element, a prima facie case of obviousness according to M.P.E.P. 2144.05(I); however, M.P.E.P. 2144.05(III) states:

> "Applicants can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range. 'The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims.' ..."

Accordingly, Applicants point out that Steel No. 7 in Table 2 contains 1.60% Si which is both outside the Si range claimed by Applicants and inside the Si range disclosed by *Kuroda*. Furthermore, Table 3 shows that Steel No. 7 has inferior wire drawability properties as well as an inferior RAσ. Therefore, since *Kuroda* teaches "superior drawing properties" (abstract) for steel according to the disclosed ranges therein, it would not have been obvious to one skilled in the art to modify the Si range to be the critical range as claimed by Applicants. Thus, *Kuroda* does not render obvious the Si range of claim 1.

Similarly, *Kuroda* teaches a P and S content of <0.035% each, while Applicants claim $\leq$0.02% each for both P and S (*Kuroda* col. 4, line 60, and Applicants' claim 1). However, Steel No. 9 in Table 2 contains 0.022% P and 0.021% S, both of which are outside the P and

S ranges claimed by Applicants and inside the P and S ranges disclosed by *Kuroda*. Furthermore, Table 3 shows that Steel No. 9 has inferior wire drawability properties as well as inferior RA_{AV} and $RA\sigma$. Therefore, for the same reasons as discussed above, *Kuroda* does not render obvious the P and S ranges of claim 1.

Likewise, *Kuroda* teaches a Ni content of 0.2-0.5% while Applicants claim $\leq$0.3% (*Kuroda* col. 4, line 63, and Applicants' claim 3). However, Steel No. 10 in Table 2 contains 0.31% which is both outside the Ni range claimed by Applicants and inside the Ni range disclosed by *Kuroda*. Furthermore, Table 3 shows that Steel No. 10 has inferior wire drawability properties as well as an inferior $RA\sigma$. Therefore, for the same reasons as discussed above, *Kuroda* does not render obvious the Ni range of claim 3.

In sum, since it would not have been obvious to one skilled in the art to modify the individual ranges of Si, P, S and Ni of *Kuroda* to be the critical ranges as claimed by Applicants; then it surely would not have been obvious to one skilled in the art to modify all 5 element ranges to be precisely those critical ranges found in Applicants' claim 1.

Additionally, M.P.E.P. 2144.05(III) states that a "prima facie case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention". Accordingly, *Kuroda's* Comparative Examples C-1 and C-2 (Tables 2 and 3) can be construed as teaching away from Applicants claimed invention as one of the properties disclosed by *Kuroda's* C-1 and C-2 is outside *Kuroda's* range but inside that of Applicants. More specifically, Applicants claim an average value of tensile strength (TS_{AV}) of 912-1300(±30) MPa (claim 1, expression 1), whereas *Kuroda* discloses tensile strength $\leq$ 1200 MPa (abstract). Therefore, Applicants' MPa(max) = 1330 and *Kuroda's* MPa(max) = 1200. In Table 2 *Kuroda* teaches that C-1 has an MPa(max) of 1325 and C-2 has an MPa(max) of 1255; both of which are clearly outside *Kuroda's* range but inside that of Applicants. *Kuroda* continues in Table 3 to describe the inferior drawing properties of C-1

and C-2. Since C-1 and C-2 are encompassed by Applicants' claims, one could construe that *Kuroda* teaches away from Applicants' claimed invention. Therefore, *Kuroda* does not render obvious Applicants' claims.

With respect to the 35 U.S.C. §103(a) rejections of claims 2 and 7 over *Kuroda* in view of *Tsukamoto* and *Bae* respectively, Applicants respectfully submit that neither the combination of *Kuroda* and *Tsukamoto* nor the combination of *Kuroda* and *Bae* render obvious Applicants' claims 2 and 7.

Concerning claim 2 and the *Tsukamoto* reference, *Tsukamoto* teaches a pearlite grain size of not more than 5.0 μm (abstract), and Applicants claim an overlapping average diameter of pearlite nodules being 10 μm or less (claim 2). However, similar to the discussion above in reference to *Kuroda*, *Tsukamoto* does not render obvious the C, P and S ranges as claimed by Applicants in claim 1. More specifically, Applicants' Steel No. 5 contains 0.95% C, Steel No. 4 contains 0.015% P and 0.011% S, and Steel Nos. 1 and 2 contain 0.007% and 0.009% S respectively; all of which are outside *Tsukamoto's* disclosed ranges and within Applicants' ranges (*Tsukamoto* col. 7, lines 23-25, and Applicants' Table 2). Steel Nos. 1, 2, 4 and 5 have acceptable mechanical properties and drawability (Table 3) even though they are outside of *Tsukamoto's* ranges for "high strength and high-ductility drawn steel wires" (col. 8, lines 49-50). Since claim 2 is dependent upon claim 1 and accordingly incorporates all the limitations of claim 1, and since neither *Kuroda* nor *Tsukamoto* renders obvious all the limitations of claim 1, the combination of *Kuroda* and *Tsukamoto* can not render obvious claim 2.

Concerning claim 7 and the *Bae* reference, *Bae* discloses 100 ppm or less of B (abstract) which is equivalent to ≤0.01%, whereas Applicants claim 0.001-0.005% B (claim 7). Applicants point out that Steel No. 13 in Table 2 contains 0.0055% B which is both outside the B range claimed by Applicants and inside the B range disclosed by *Bae*.

Furthermore, Table 5 shows that Steel No. 13 has inferior wire drawability properties as well as inferior RA_{AV} and $RA\sigma$. Therefore, since *Bae* teaches "high strength, high ductility wire rods and steel wire" (col. 11, lines 14-17) according to the disclosed ranges therein, it would not have been obvious to one skilled in the art to modify the B range to be the critical range as claimed by Applicants. Thus, *Bae* does not render obvious the B range of claim 7. Moreover, claim 7 is dependent upon claim 1 and accordingly incorporates all the limitations of claim 1, and since *Kuroda* does not render obvious all the limitations of claim 1, the combination of *Kuroda* and *Bae* does not render obvious claim 7.

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and passage of this case to issue.

Respectfully submitted,

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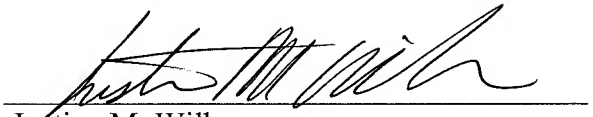

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